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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/520,987

08/10/2005

Carole Noutary

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07/05/2007

REED SMITH, LLP

ATTN: PATENT RECORDS DEPARTMENT

599 LEXINGTON AVENUE, 29TH FLOOR

NEW YORK, NY 10022-7650

EXAMINER

SHAH, MANISH S

ART UNIT

PAPER NUMBER

2853

MAIL DATE

DELIVERY MODE

07/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/520,987

Applicant(s)

NOUTARY, CAROLE

Examiner

Manish S. Shah

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-7 & 9-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Ylitalo et al. (# US 6558753).

Ylitalo et al. discloses:

- An ink-jet ink which is substantially free of water (see Examples), volatile organic solvents and multifunctional (meth)acrylates (see Example) comprising at least one monofunctional (meth)acrylate monomer (column: 11, line: 20-40), at least one unsaturated ether monomer (column: 8, line: 35-45; column: 11, line: 20-25), at least one radical photoinitiator (column: 17, line: 20-30) and at least one coloring agent (column: 16, line: 15-60), the ink having a viscosity of less than 50 mPas at 25 °C (3 to 30 cps) (column: 6, line: 19-27), wherein the dispersible pigment as a coloring agent (column: 16, line: 10-67; column: 17, line: 1-20).
- An ink-jet ink is suitable for printing onto porous substrates (column: 19, line: 25-30).

- An ink-jet ink includes, by weight, from 2 to 15 parts of monofunctional (meth)acrylate monomer to 1 part of unsaturated ether monomer (see Examples).
- The monofunctional (meth)acrylate monomer is selected from the esters of acrylic acid, for example octyl acrylate, decyl acrylate, isobornyl acrylate (column: 11, line: 20-40), 2-(2-ethoxyethoxy) ethylacrylate (column: 14, line: 44-17), and mixtures thereof (column: 11, line: 20-41), wherein the monofunctional (meth)acrylate monomer is present in an amount from 50 to 95% by weight, preferably from 60 to 80% by weight (column: 11, line: 12-20).
- The unsaturated ether monomer is present from 1 to 30% by weight, preferably from 7 to 15%, provided that the ratio of (meth)acrylate monomer to unsaturated ether monomer is between 2:1 and 15:1 (see Examples; see Table: 7), wherein the unsaturated ether monomer is a vinyl ether monomer (column: 8, line: 35-45).
- The photoinitiator is a free radical photoinitiator, preferably selected from benzophenone (column: 17, line: 23-40), wherein the photoinitiator is present from 1 to 20% by weight, preferably from 4 to 10% by weight, of the ink (column: 17, line: 35-40).
- The dispersible pigment is present from 0.5 to 15% by weight, more preferably from 1 to 5% by weight, of the ink (see Examples).
- A method of ink-jet printing, wherein the method uses the ink-jet ink, and printing is carried out onto porous substrates (column: 19, line: 15-30).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ylitalo et al. (# US 6558753) in view of Roth (# US 5889084).

Ylitalo et al. discloses all the limitation of ink composition except that the vinyl ether is selected from triethylene glycol divinyl ether, diethylene glycol divinyl ether, 1,4-cyclohexanedimethanol divinyl ether, ethylene glycol monovinyl ether and mixtures thereof.

Roth teaches that to get the chemically resistance and smear resistance printed image, ink composition includes the vinyl ether monomer, wherein the vinyl ether monomer is selected from ethylene glycol monovinyl ether and diethylene glycol divinyl ether (column: 8, line: 16-25).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink composition of Ylitalo et al. by the aforementioned teaching of Roth in order to have the chemically resistance and smear resistance printed image.

3. Claims 1-2 & 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roth (# US 5889084) in view of Marshall et al. (# US 5275646).

Roth discloses:

- An ink-jet ink which is substantially free of water, volatile organic solvents and multifunctional (meth)acrylates (see Examples; column: 3, line: 40-60) comprising at least one unsaturated ether monomer (column: 3, line: 35-60), at least one radical photoinitiator (column: 9, line: 10-30) and at least one coloring agent (column: 11, line: 9-25), the ink having a viscosity of less than 50 mPas at 25 °C (1 to 25 cps) (column: 12, line: 1-10), wherein the dispersible pigment as a coloring agent (column: 11, line: 10-30).

- An ink-jet ink is suitable for printing onto porous substrates (uncoated paper) (column: 12, line: 25-30).

- The ink composition includes the vinyl ether monomer, wherein the vinyl ether monomer is selected from ethylene glycol monovinyl ether and diethylene glycol divinyl ether (column: 8, line: 16-25).

- The dispersible pigment is present from 0.5 to 15% by weight, more preferably from 1 to 5% by weight, of the ink (see Examples).

- A method of ink-jet printing, wherein the method uses the ink-jet ink, and printing is carried out onto porous substrates (column: 12, line: 20-30).

Roth differs from the claim of the present invention is that:

(1) An ink-jet ink includes a monofunctional (meth)acrylate monomer, wherein the monofunctional (meth)acrylate monomer is selected from the esters of acrylic acid, for example octyl acrylate, decyl acrylate, isobornyl acrylate, 2-(2-ethoxyethoxy) ethylacrylate, and mixtures thereof, wherein the monofunctional (meth)acrylate

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monomer is present in an amount from 50 to 95% by weight, preferably from 60 to 80% by weight.

(2) The photoinitiator is a free radical photoinitiator, preferably selected from benzophenone (column: 17, line: 23-40), wherein the photoinitiator is present from 0.01 to 10% by weight of the ink (column: 9, line: 10-26).

Marshall et al. teaches that to get the thermally stable, non-flammable, and low toxicity ink composition, ink composition includes the monofunctional (meth)acrylate monomer, wherein the monofunctional (meth)acrylate monomer is selected from the esters of acrylic acid, for example octyl acrylate, decyl acrylate (column: 3, line: 20-40), wherein the monofunctional (meth)acrylate monomer is present in an amount up to 70% by weight (column: 3, line: 40-45). They also teaches that the ink composition includes the photoinitiator is a free radical photoinitiator, preferably selected from benzophenone (column: 4, line: 5-20), wherein the photoinitiator is present from 0.01 to 10% by weight of the ink (column: 4, line: 60-68).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink composition of Roth by the aforementioned teaching of Marshall et al. in order to have the thermally stable, non-flammable, and low toxicity ink composition, which gives high quality printed image.


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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manish S. Shah whose telephone number is (571) 272-2152. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Manish S. Shah
Primary Examiner
Art Unit 2853

MSS

6/28/07